

Supplement Materials for AAC01578-16R2 “**K13-Propeller Mutations in *Plasmodium falciparum* Populations in Malaria Endemic Regions of Vietnam from 2009 to 2016**”

Table S1. Number of samples with K13-propeller mutations in *P.falciparum* populations in Vietnam 2009-2016.

Mutations	No	Binh Phuoc							Ninh Thuan			Gia Lai	
		2009	2010	2011	2012	2013	2014	2015	2013	2014	2015	2014	2015
		-	-	-	-	-	-	-	-	-	-	-	-
		2010	2011	2012	2013	2014	2015	2016	2014	2015	2016	2015	2016
Thr474Ile	1	0	1	0	0	0	0	0	0	0	0	0	0
Tyr493His	24	0	1	1	10	6	0	0	4	2	0	0	0
Arg539Thr	5	0	0	3	0	0	0	0	0	0	0	2	0
Ile543Thr	34	0	15	15	2	1	0	0	1	0	0	0	0
Pro553Leu	65	12	9	21	9	2	3	0	0	0	0	9	0
Val568Gly	16	3	4	7	0	0	0	0	0	0	0	2	0
Pro574Leu	5	1	1	2	0	0	0	0	0	0	0	1	0
Cys580Tyr	128	4	6	10	4	4	31	34	0	2	2	14	17

Table S2: Alleles at K13 flanking microsatellite loci of Cys580Tyr mutant parasites from study sites in Vietnam. NT: Ninh Thuan province (n=4); BP: Binh Phuoc province (n=30); GL: Gia Lai province (n=18). To improve pattern visualization, at any one locus each allele is assigned a different background colour. Blank cells indicate that the assay did not produce a result.

Sample	Microsatellite loci									
	72.3	31.5	31	15.1	8.6	-0.15	-6.36	-31.9	-50	-56
NT01	205	194	304	145	276	195	284	209	258	
NT02	174	194	304	117	276	195	284		258	
NT03	179	194	304	140	276	195	284	209	258	
NT04		194	304	140	276		284	209	258	
BP01	178	194	304	137		197				
BP02	178	194	304	137		197	286	209	261	
BP03		194	304	137		197	286	209	261	
BP04	173	194	304	137		197		209	261	
BP05		194	304	137				209	261	
BP06		194	304	137		197	286	209	261	
BP07		194	304	137		197		209	261	
BP08		194	304	137		197		209	261	
BP09		194	304	137	278	197		209	261	
BP10		194	304	137			286	209	261	
BP11		194		137		197	286	209	261	
BP12		194	304	137		197		209	261	
BP13		194	304	137		197		209	261	
BP14		194	304	137		197		209	261	
BP15		192	304	137	278	197	286	209	261	
BP16		192	304	137		197	286	209	261	
BP17		192	304	137	278	197	286	209	261	
BP18		192	304	137	278	197	286	209	261	
BP19		192	304		278	197	286	209	261	
BP20		192	304	137	278	197	286	209	261	
BP21		192	304	137	278	197	286	209	261	163
BP22		192	304	137	278	197	286	209	261	164
BP23		192	304	137	278	197	286	209	261	181
BP24		194	306	141	288	197	286	209	258	
BP25		192	306	141	288	197	286	209	258	
BP26		192	306	141	288	197	286	209	258	
BP27		192	306	141	288	197	286	209	258	
BP28		192	306	141	288	197	286	209	258	

BP29		194	306	141	288	197	286	209	258	
BP30									258	
GL01			304	150		195	284	209	261	
GL02		186	304	150	278		284		261	
GL03		202	304	150	278	195	284	209	261	
GL04		194	304	150	278	195	284	209	261	
GL05		194	304	150	278	195	284	209	261	
GL06		189	304	150	274	195	284	209	261	
GL07		189	304	150	274	195	284	209	261	
GL08		189	304	150		195	284	209	261	
GL09		189	304	150	274	195	284	209	261	
GL10		194	304	150	285	195	284		261	
GL11		194	304	150	288	195	284	209	261	
GL12		194	304	150	285	195	284		261	
GL13		198	304	150	288	195	284	209	261	
GL14		198	304	150	276	195	284	209	261	
GL15		198	304	150	276	195	284	209	261	
GL16		198	304	150	288	195	284	209	261	
GL17			304	150	288	195	284	209	261	
GL18			304	150	288	195	284	209	261	

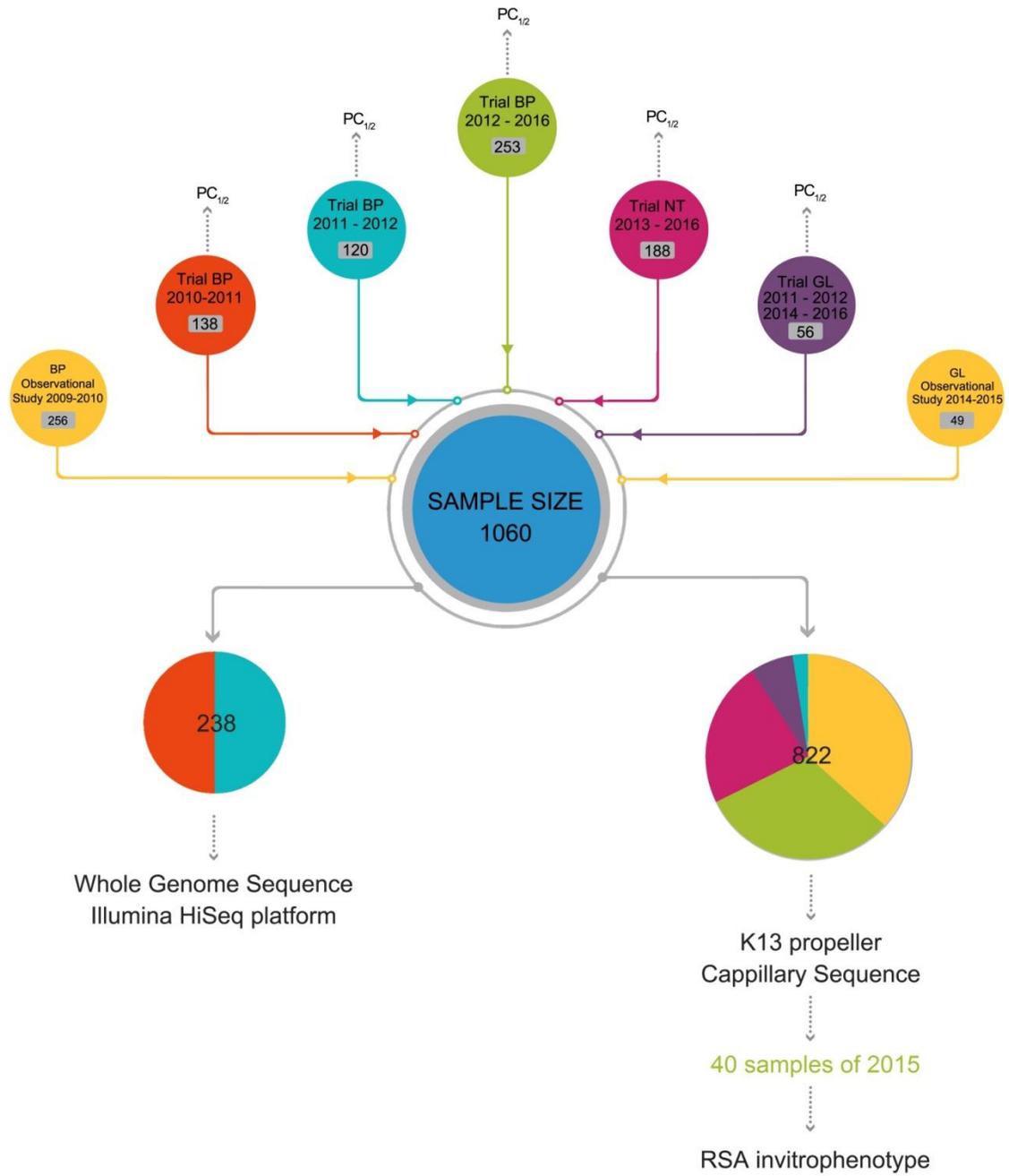


Figure S1: Flow diagram of sample processing

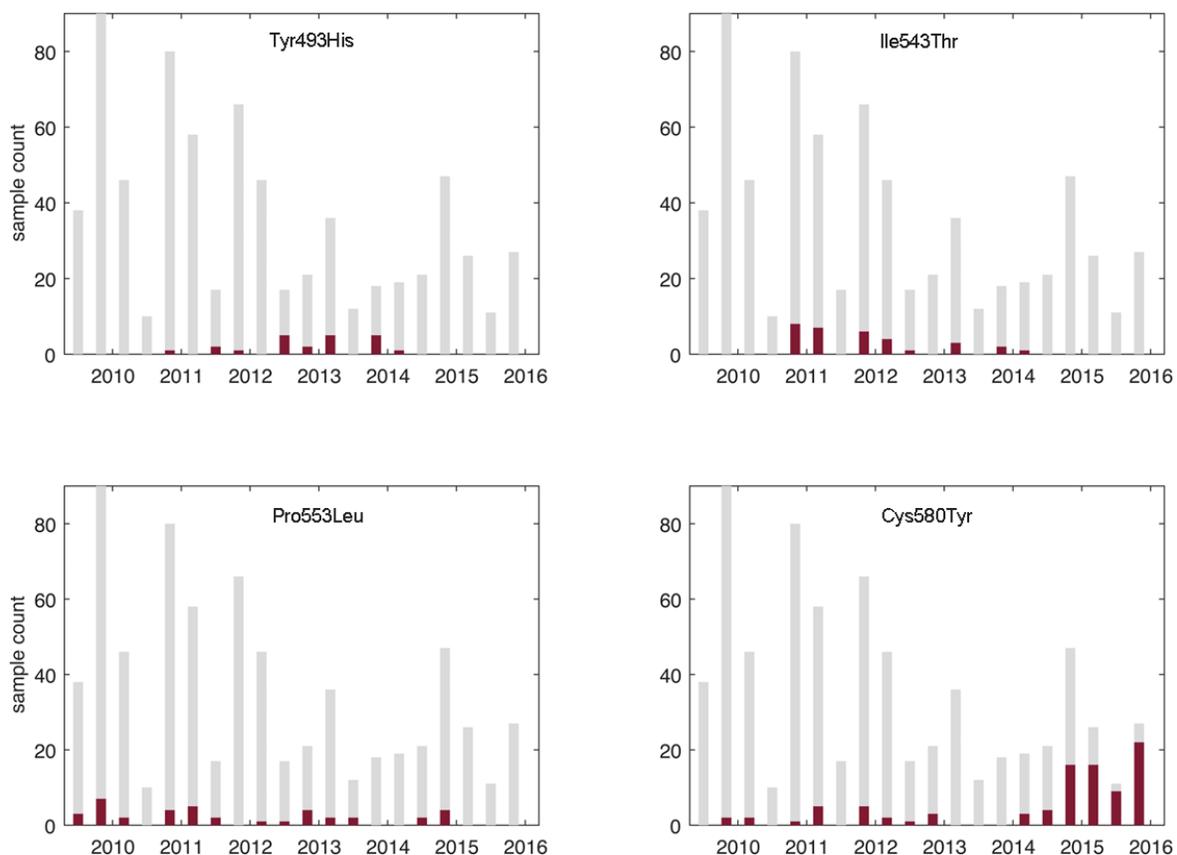


Figure S2. Percentage of four K13 polymorphisms in Binh Phuoc province 2009-2016. Sample counts disaggregated to 4-month periods. The gray bar shows the total number of samples collected during the given period, and the red portion of the gray bar shows the number with a particular mutation. The tick marks are placed on January 1 of each year. In the period Sep-Dec 2009, 146 samples were collected.